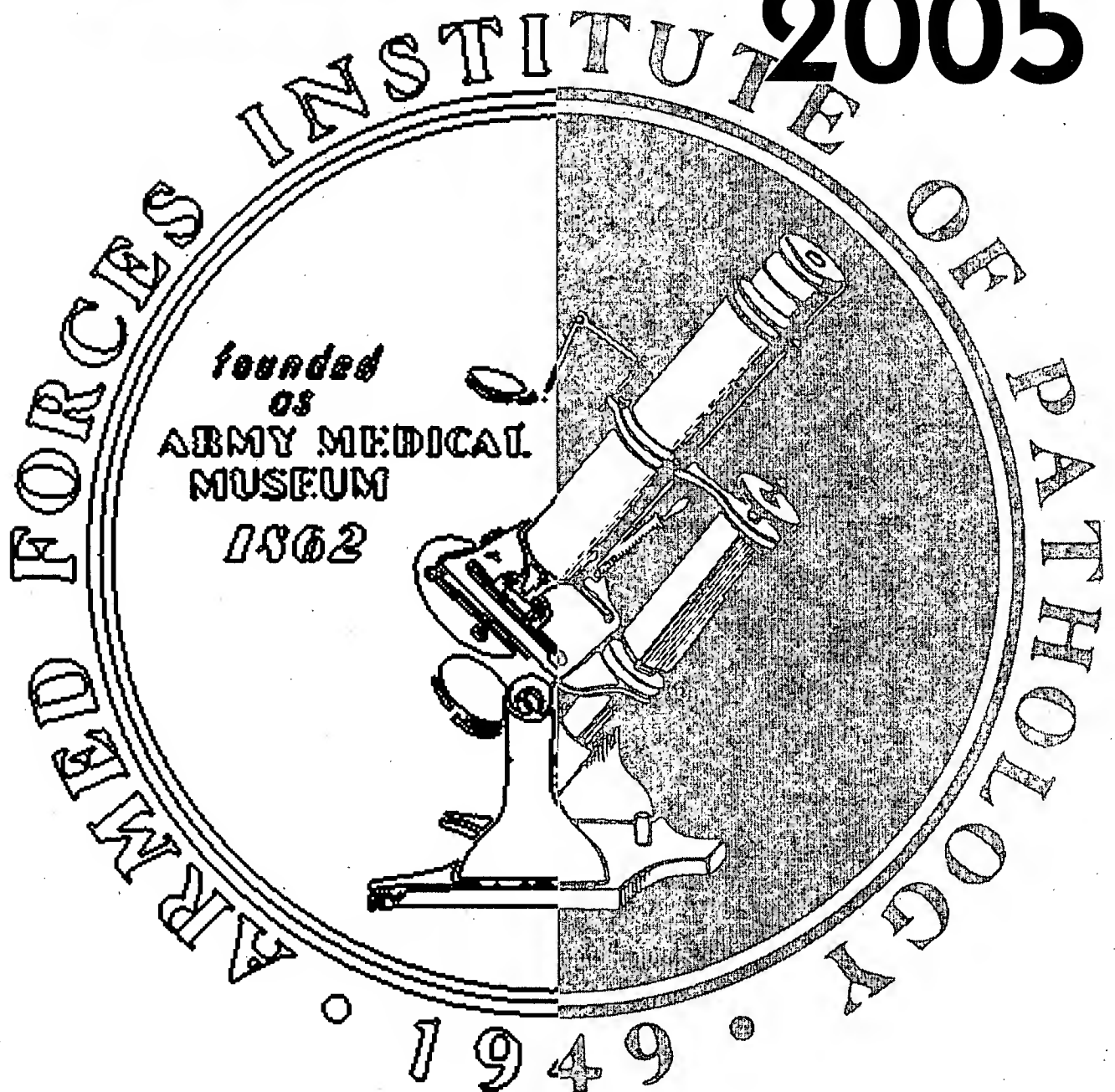


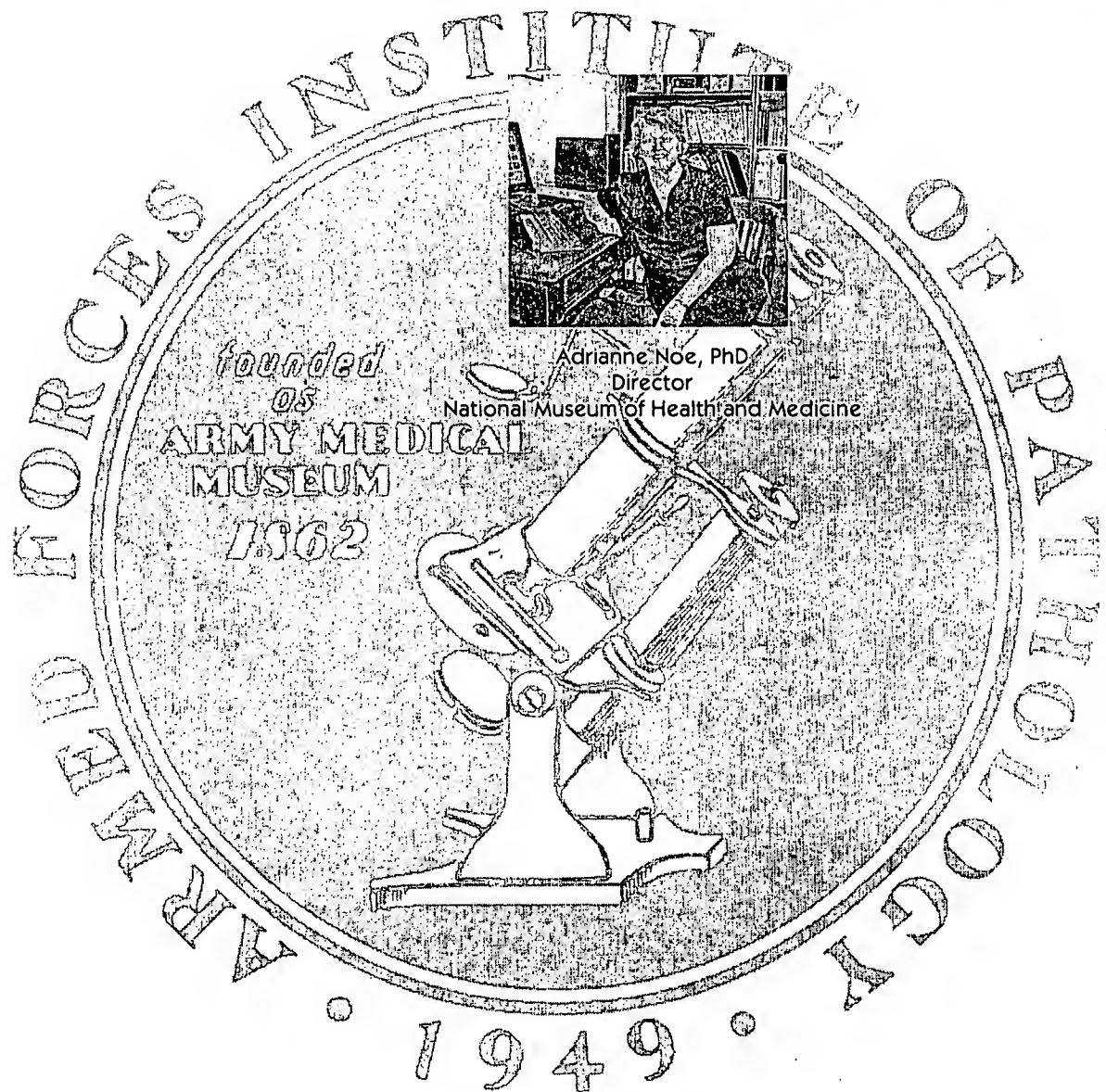
ARMED FORCES INSTITUTE OF PATHOLOGY

# ANNUAL REPORT

# 2005



# NATIONAL MUSEUM OF HEALTH AND MEDICINE





Adrienne Noe, PhD  
Director  
Date of Appointment—September 1995

## NATIONAL MUSEUM OF HEALTH AND MEDICINE, AFIP

### ORGANIZATION

The Museum is organized into the Office of the Director, Public Programs and Exhibitions, and Collections.

### IMPACT

The NMHM promotes the understanding of medicine, past, present, and future, with a special emphasis on American military medicine. It inspires interest in personal and public health. As the nation's museum of health and medicine since 1862, we aggressively identify, collect, and preserve important resources to achieve a broad agenda of innovative exhibitions, educational programs, and scientific, historical and medical investigations.

To achieve this, we promote the responsible use of the nation's National Historic Landmark collection by continuing to catalog the collections, to record detailed information about the holdings and to edit record to make databases available for the Internet, which allow the collection to be more accessible to researchers. We cultivate ties with professional medical societies and with the Department of Defense to assist in collecting artifacts significant to the history of the practice of medicine and the evolution of medical technology, emphasizing military medicine. Finally, we collect, preserve and interpret modern examples of significant medical technology to document the history of the practice of military medicine and the evolution of medical technology to ensure the continued development of the National Museum of Health and Medicine, AFIP, as a Department of Defense asset and as a national and international resource for the military medical community, professional health care workers and the general public.

In so doing, we emphasize the Museum's focus on critical public and military health issues, the importance of the Museum as a bridge between biomedicine and the general public, the Museum's role in helping to recruit the health professionals of tomorrow, and the Museum's research programs in medical medicine, medical imaging, and other areas.

### OFFICE OF THE DIRECTOR

#### STAFF

- Adrienne Noe, PhD, Director
- Donna R. White, Administrator
- Steven Solomon, Public Affairs Officer
- (A) Courtney MacGregor, Public Affairs Specialist
- Theresa Butler, Staff Assistant
- Melba Stewart, Special Events and Facilities
- Shelly Currie, Visitor Services Representative
- (D) Von Keith Brooks, Visitor Services Representative

(D) Andre Upshur, Visitor Services Representative  
 (A) Luis A. Pineda, Visitor Services Representative  
 (A) David Martínez, Visitor Services Representative  
 (A/D) Latrice Thorpe, Visitor Services Representative  
 Elizabeth C. Lockett, Collections Specialist, HDAC  
 William F. Discher, Imaging Technician, HDAC

The Office of the Director oversees the general activities and provides guidance for all aspects of the Museum and provides policy, technical, and scientific direction. It directs all activities for the site, facility, and programs of the Museum as its activities evolve. Activities handled within the office are external and internal relations, governmental affairs, press and public relations, and institutional development. The office works with print and broadcast media, congressional offices, and local, national, and community organizations to encourage contract with the coverage of AFIP's National Museum of Health and Medicine. The Administrative support staff continues to improve the quality of support provided to the departments of the Museum. This administrative group provides a variety of management services essential to the operation of the Museum in the areas of budgeting, manpower/personnel, contract administration, and organizational management. The office provides general supervision of the Office of Public Affairs, the Department of Programs and Exhibitions, and the Department of Collections and Research. The office of the Director communicates and coordinates with the American Registry of Pathology (PL94-361) and numerous public and private organizations for institutional development. The Director of the National Museum of Health and Medicine, is a member of the AFIP Executive Committee. As in past years, the Museum cultivates working relationships with international organizations of similar interest.

#### ***Gift Shop***

The Gift Shop, operated via a cooperative enterprise with the ARP, offers a variety of merchandise to visitors of all ages and educational interests. The Gift Shop contributes to the advance marketing efforts of the Museum and Institute, extends the effectiveness of the Museum's programs and exhibitions by selling objects related to Museum activities, and generates revenue. Each object has a distinct connection with the Museum's mission, exhibits, or programs.

#### ***Facilities and Special Events***

The National Museum of Health and Medicine's facilities and special events staff, in conjunction with the AFIP Directorate of Logistics Department, support and offer consultation to the NMHM in the following areas: physical security, storage movement, maintenance, repair and accountability of materials, housekeeping, exhibit upkeep and maintenance, waste collection and disposal, notification to the Provost Marshal of visitors participating in special events and media filming. This notification is a part of the installation's ongoing security process. This department serves as a NMHM liaison with the AFIP Office of Safety Management. It also maintains an inventory of all hazardous chemicals located within the NMHM. The department serves as a member of many safety-related committees and also investigates all facilities safety issues concerning staff and visitors.

The Facilities Department assisted in assembling and disassembling temporary exhibits and prepared maintenance programs the following exhibits: The National History Day Program, "Penelope: The World's First Autonomous, Vision-guided, Intelligent, Robotic Surgical Instrument Server," "Healthy Heart," and "Body Image/Body Essence: Viewing Ovarian Cancer through the Art of Sculpture."

Special Events were successful in providing support to the AFIP, WRAMC and the surrounding community by hosting and scheduling annual events such as Ash Lecture and WRAMC continuing education courses such as: Medical Effects of Ionization Radiation, Medical Management of Chemical and Biological Casualties and Emergency Medical Technician courses. In 2005, the event staff coordinated logistical support for a combined lecture participation of 3,646 people. The event staff also provided logistical assistance for NMHM-sponsored events such as monthly health fairs, docent meetings, training sessions and other educational programs.

Standard Operating Procedures for Museum meetings and receptions were generated and provided to the event planners or points of contact for events. The office staffs and secures each event with Visitor Service Representatives. We also offer each event planner and/or point of contact a list of specialty caterers familiar with the policy and procedures of the NMHM. The

Special Events Branch also routinely assists with audio-visual needs of instructors, guest speakers, and event presenters.

### **Public Affairs**

During 2005, the Museum's Public Affairs Office continued marketing efforts and strengthened relationships within the business, museum, and tourism communities to increase awareness of the Museum throughout the Washington, DC metropolitan area, and among tourism and military audiences:

Through this office the Museum maintains a relationship and cultivates ties with as many area grassroots and cultural-based organizations as possible in order to better position itself as a significant historical community, and cultural attraction. The Museum remained an active member of Cultural Tourism DC, a grassroots, non-profit coalition of more than 140 arts, heritage, cultural, and community organizations throughout Washington, DC, that works with a wide array of partners in the public and private sectors to make all of Washington, DC a world-class destination for cultural tourism. Through the CTDC, the Museum received prominent recognition in its publication providing an inventory of all DC cultural attractions by neighborhood and theme and was featured in its new "Discover the Heart of Washington" brochure. The Museum benefits from other efforts organized through the CTDC, such as collaborative marketing materials, a joint product-licensing program, and a neighborhood heritage trail tour along the Georgia Avenue corridor.

In addition to membership in the DC-based Cultural Tourism DC, the Museum also reaches into the State of Maryland through its membership in the Conference and Visitors Bureau of Montgomery County, Md. The Museum is located just a few blocks from Silver Spring, in Montgomery County, which attracts nearly 2 million visitors annually.

The Museum remained a designated site on the Civil War Discovery Trail, which is one of slightly more than a dozen National Millennium Trails in the United States. As a result, the Museum received recognition in marketing and promotional materials produced by the Civil War Trust at no cost.

The Museum responded throughout the year to requests for information or assistance received by email, telephone, and mail from the general public.

### **Marketing**

Working closely with the Museum's Public Programming Department, Public Affairs placed an emphasis on promoting programs and workshops to the local community to raise awareness of the Museum's educational offerings and to increase program attendance.

Specially promoted within the internal WRAMC and AFIP community, as well as to the public, were the monthly health fairs held at the Museum, including National Glaucoma Awareness Month, American Heart Month, National Kidney Month, Foot Health Awareness Month, National Blood Pressure Education Month, and National Safety Month. Public Affairs also assisted with and promoted the Museum's annual Brain Awareness Week program, a murder mystery forensics workshop, a book signing for the author of *Soldier Dead* that was covered by *The Washington Post* and WTOP-AM, a DNA and forensic evidence program, and the screening of the film "Battle Circus."

In addition to handling publicity and media coverage, Public Affairs also was responsible for coordinating the Museum's annual participation in National History Day, a program for middle and high school students across the country; and making arrangements for a museum display to be staffed at St. Elizabeth's Hospital for a special event celebrating 150 years of service anniversary.

A special effort was made during 2005 to promote "Body Image/Body Essence: Viewing Ovarian Cancer Through the Art of Sculpture," an exhibit of 15 sculptures by Massachusetts artist John Magnan that he created as a reaction to his wife's 1999 diagnosis with Stage III ovarian cancer. Described as an exhibit that "explores and highlights the process of overcoming ovarian cancer," there was significant coverage of the exhibit, including a lengthy review in the *Journal of the American Medical Association* as well as coverage in *Washington Blade*, Maryland Public Television, and by the exhibit co-sponsor, arranged by Public Affairs, *Washington Woman* magazine.

Public Affairs also handled the schedules and designed ads for Comprint Military Publications, *Washington Woman*, *The Washington Post*, *Washington City Paper*, *Guest Informant*, and *Washington DC Quick Guide* in 2005.

Also, Public Affairs led efforts to explore collaboration with other organizations, leading to

successfully partnering with DC's Marian Koshland Science Museum on a forensics program and the NIH's National Institute of General Medical Sciences by assisting them with their publication "Inside the Cell."

### **Impact**

The Museum continued to produce and distribute more than one news release a month for the media in 2005, resulting in measurable media exposure. More than 500 stories and news brief items were printed about exhibits, loans, accessions, events, programs, and health fairs in 2005, in publications with a combined circulation of more than 100 million. This coverage appeared in local, national, and international publications, as well as on TV and radio stations, the most notable being articles in *The Washington Post*, *The Washington Times*, *Washington City Paper*, *Washington Informer*, *The Richmond Times-Dispatch*, *The Dallas Morning News*, and *JAMA*, as well as a feature broadcast by National Public Radio's "All Things Considered."

### **Media Coverage**

An exhibit at the National Museum of Health and Medicine in Washington, DC is offering views inside the human body never before seen. These images from a new book, *The Architecture and Design of Man and Woman*, are not photographs or paintings. They are computer-built visualizations of data imaged from the bodies of a man and woman who died in the early 1990s, and who donated their corpses to medical science. Sixty prints from the book by photo-journalist Alexander Tsiaris, as well as a video made by his company, Anatomical Travelogue, are on display at the National Museum of Health and Medicine. The show is called "The Human Body Revealed." Elizabeth Lockett is the curator. "The bodies were actually frozen in a large block of blue goo, and they were ground, literally ground, like [in] a mill," she said.

- *Voice of America*

The bronze helmet and shield—a single sculpture called Warrior—is Mary Magnan's favorite among the 15 works her husband, artist John Magnan, created in response to her diagnosis and treatment for advanced ovarian cancer. John fashioned the armor from castings of Mary's hairless skull and torso, taken while she was receiving chemotherapy. "At first I was reluctant to put this work on display," Mary said. "I felt so exposed." But visitors to John's New Bedford, Mass, studio convinced her the work honors the strength women muster to confront a life-threatening disease. Now, Warrior and other works in several media constitute a traveling exhibit, *Body Image/Body Essence*, on view through March 31, 2006, at the National Museum of Health and Medicine in Washington, DC. By highlighting the experiences of women and families dealing with ovarian cancer, the Magnans hope to raise awareness of the disease, prompting earlier detection and treatment.

- *Journal of the American Medical Association*

Want to feel the inside of a stomach? View a smoker's lung? The National Museum of Health and Medicine enables tourists to see and feel the effects of disease on the human body and documents the shifting course of the history of medicine. Founded in 1862, the institution is at its ninth location, on the campus of the Walter Reed Army Medical Center. The setting is appropriate, since the Museum traces changes in the practice of medicine during various wars. Its collection of artifacts includes the bullet that killed Abraham Lincoln and Paul Revere's dental equipment (bet you didn't know that in addition to being a silversmith, Revere was a dentist).

- *TIME Magazine*

"Medicine is important to the military and military medicine is important to the nation," the director of the National Museum of Health and Medicine said in describing how she and her staff go about collecting and organizing thousands of items for possible exhibition. "We need the raw material," Adrienne Noe said of the charge to the Museum from its founding in 1862 during the American Civil War. "Sometimes people will approach us" about donating something, but the Museum also does "prospective collecting. We want that object [such as the improved self-clotting bandages being used in Afghanistan or Iraq]" because it was using military technology or it was a prototype in its field (such as the Museum's extensive collection of microscopes dating to the 17th century). The Museum's collection has been designated as National Historic Landmark by the Department of the Interior.

- *Association of the U.S. Army News*

Founded in 1862 to document the effects of war wounds and disease on the human body, the Museum displays everything from a large human hairball to skull fragments collected after Abraham Lincoln's assassination. But some of the Museum's most unsettling stuff is in storage — including thousands of amputated body parts from more than 6,000 soldiers wounded

during the Civil War. The body parts were sent to Washington on the orders of Surgeon General William Hammond, who had told medical officers to send interesting specimens from the battlefield for research and possible display. Every body part in the Museum's collection — which includes larynxes, hearts, bones and brains — has historical significance. Some were saved to illustrate the disease or wound that afflicted them, others the medical procedure used to remove them.

- *National Public Radio, All Things Considered*

Alan Hawk, a Museum collections manager, turns the key on a big light blue locker, opens a drawer and reveals some of history's treasures: sections of bullet-pierced vertebrae from both President James Garfield and Lincoln assassin John Wilkes Booth. Next to them is a little jar containing President Dwight Eisenhower's gallstones. And in a nearby cabinet is the full skeleton of Able, the first monkey sent into space. The gems are among 25 million artifacts held by the National Museum of Health and Medicine in Washington. This is no ordinary Museum. After all, its newsletter is called *Flesh and Bones*. On the campus of Walter Reed Army Medical Center, the facility was established in 1862 by Surgeon General William Hammond to collect "specimens of morbid anatomy ... together with projectiles and foreign bodies removed." Today, the Museum and two warehouses hold 5,000 skeletal specimens, 10,000 preserved organs and 12,000 microscopes, surgical instruments and other objects. It's all there to document the history and practice of medicine since the Civil War. It may seem a bit ghoulish. But this is serious business for the museum staff... The museum is a unit of the Armed Forces Institute of Pathology.

- *The Dallas Morning News*

In 2005 the Museum's staff assisted, met with, and/or was interviewed by media representatives for stories or documentaries on:

BBC  
Bloomberg News  
Canadian Broadcast Corp  
Discovery Health  
Fox 5 News  
Grenada TV  
History Channel  
Maryland Public TV  
NewsHour with Jim Lehrer  
MTV News  
National Geographic TV  
NBC News  
Oregon Public Broadcasting  
PBS/Nova  
Reuters TV  
Swedish Broadcasting Corp.  
VOA TV News  
WRC-TV (Washington, D.C.) NBC 4  
WTTG-TV (Washington, D.C.) Fox 5  
WUSA-TV (Washington, D.C.) CBS 9

Also, in 2005 the Museum's Public Affairs Office facilitated use of 1918 flu images in its Otis Historical Archives for a number of broadcast and print media, including:

Adbusters  
American Public Health Association's "Influenza and the 2004 Flu Vaccine Shortage"  
Atlanta Journal-Constitution  
Associated Press  
Awareness Publishing Group  
CBS Evening News  
CNN  
CQ Researcher  
Elsevier Limited's (Mosby) Rapid Reference Series - "Influenza"  
Feature Story News  
Foreign Policy Association  
Fox 5

*Galveston City Daily News*  
*GEO Magazine*  
*Government Executive magazine*  
*Granada TV*  
*Johns Hopkins School of Public Health*  
*Maryland Medicine magazine*  
*Miami Herald's "Health and Fitness" section*  
*National Center for Injury Prevention and Control – CDC*  
*National Institute of General Medical Services*  
*NBC News*  
*NBC Nightly News with Brian Williams*  
*NBC Today Show*  
*NTV (Japanese Public TV)*  
*Nurse Week*  
*Polish TVP3*  
*Revolution: The Journal for RNs and Patient Advocacy*  
*SCIENCE WEB, INC.*  
*Star TV*  
*Swiss Institute of Bioinformatics*  
*Tasmania Department of Education*  
*The Examiner*  
*The (Fredericksburg, Va.) Free Star*  
*The Oklahoman*  
*USA Today*  
*Vanity Fair*  
*Washington Post (multiple times)*  
*Watch Tower's "Awake!"*  
*WGBH/Nova*

#### **Museum Newsletter**

The Museum's newsletter, *Flesh and Bones*, was published during 2005 with an expanded circulation. In addition to being distributed internally to the departments of the AFIP, the newsletter was sent electronically or mailed to the Museum's mailing list, media, schools, libraries, and visitors who have requested to receive information by mail. It contains articles that are researched and written by the Museum staff, about new exhibits, special programs, recently acquired artifacts, loans to other museums, etc.

#### **The World Wide Web Site**

The Museum Public Affairs Office was principally involved in expanding content on the Museum web site to include information about new exhibits, such as "A Healthy Heart," "Body Image/Body Essence," and "Penelope: The World's First Autonomous, Vision-guided, Intelligent, Robotic Surgical Instrument Server." In addition, in its role as website content manager, the Public Affairs Office works with its Webmaster to post information about program events, visitor and media comments, and accomplishments of the Museum's staff, called Staff on the Go. The Museum also continued to pursue opportunities to be added to other museum and tourism websites.

According to the website's traffic report provided by Web Trends, the website is averaging more than 12,000 hits daily compared to 8,700 hits daily in 2004, and in 2005 had more than 812,754 unique visitors who spent more than 8 minutes during each visit to the website. The Museum ensures accurate and timely information is provided to online web site information resources, and is currently linked from 141 other sites.

#### **Professional Development/Media Contacts**

To reach members of the media, Public Affairs traveled to off-site meetings and programs about or at *Maryland Life Magazine*, *The Baltimore Sun*, *The Washington Post*, WBAL-TV (Baltimore Channel 11), WCBM-AM (Baltimore 680), WJZ-TV (Baltimore Channel 13), WLZL-FM (Washington, DC 99.1), WTMD-FM (Baltimore 89.7), WTTG-TV (Washington, DC Channel 5). A member of Public Affairs completed an offsite workshop on Adobe Photoshop, and attended programs or meetings at the University of Maryland Anatomy Lab, the Textile Museum, and the Dana Foundation.



## PUBLIC PROGRAMS AND EXHIBITIONS

The division directs and coordinates operational and interpretive components of the Museum. This includes administration, exhibitions, public programs, educational tours, facilities use, and related activities. Division staff worked with governmental agencies, professional associations, museums, and individuals to develop interpretive strategies that promote greater public awareness of contemporary and historical perspectives on disease, public health, and health education.

### STAFF

(D) James Carey Crane, Exhibits Manager  
Janet Melson Burns, MA, Public Programs Coordinator  
Andrea K. Schierkolk, BA, Tour Program Manager  
(A/D) Jana Justin, Exhibits Specialist  
(A) William Discher, Exhibits Specialist

### Docents

Sheila Anderson, BS; Solomon E. Barr, MD; Ed Beeman, MD; Catherine Bonomo, BS; Edward Byrde, BS Ph; James DePersis; Regina Hunt, MEE; Marianne Jessee-Solfronk, MS; Brenda Kiessling, MD; Pam Kincheloe, BSN, JD; Lew E. Larson, BSEE; Richard Mulvaney, MD; Vincent G. Petrella, MD; Anne Pollin; Enid Rosen, BS; Marjorie D. Shaw, BA, PhD; Shen Sung, MD, S. Stephen Schiaffino, PhD; Carolyn Whittenberg, MSN

### Volunteers

Pauline E. Rabin, MD; S. Stephen Schiaffino, PhD

### Visitor Services

The overall attendance in 2005 increased by 21 % over last year. The number of guided tours increased in 2005 by 60%, along with the attendance for these tours by 13%. The number of unguided tours increased by 42%, with visitors participating in unguided tours increasing by 41%. There were also increases in numbers of individuals attending Public Programs by 102% and Special Events by 41%.

### Programs

Programming in conjunction with the exhibits "To Bind up the Nation's Wounds, Battlefield Surgery 101: From the Civil War to Vietnam," and "Blood, Sweat and Saline: Combat Medicine in the Korean Conflict," as well as military medicine included a lecture and book signing by author Michael Sledge in May and a 2-day screening of the film "Battle Circus" in June.

Michael Sledge provided a lecture and book-signing on his new release, *Soldier Dead*, a book that explores the complicated physical, social, religious, economic, and political issues concerning the remains of men and women who died while serving this country during war and times of conflicts abroad. His discussion revealed the shifts that have occurred in the process of recovery, identification, return, and burial, as well as trace the ways in which this process has evolved over time.

Alan Hawk, manager of Historical Collections, provided introductions for both parts of the 2-day screening of "Battle Circus" in June. This 1953 film is based on a US Army doctor's experience in a mobile surgical hospital during the Korean War. Mr. Hawk began his discussions of the film by providing a brief history of the movement of surgery being performed in the open battlefield during the Civil War to the arrival of the mobile surgical hospital for operating on the wounded soldier inside of a more controlled, sterile environment.

The film "Behind the Lines," released in 1997, was presented in 2 parts. Jeff Reznick, PhD, provided introductions to both parts of the screening and highlighted important themes in the story. This film is based on the work of Dr. William Rivers, a British Army psychiatrist, who worked with shell-shocked soldiers during World War I. Set in a British Army hospital in Craiglockart, Scotland, in 1917, the film tells a story that was based on true events.

"Learning about Forensics III: A Museum Murder Mystery," the third in a series of forensic programs, was presented in October. This day-long program, offered in 2 parts, was designed to provide the audience opportunities to see what real forensic scientists do to gather, analyze, and/or interpret forensic materials to help identify the remains of a dead person or to help solve a mystery. In the first part of the program, participants learned specifically about forensic anthropology and worked in teams to examine objects displayed in the "Human Body, Human Being" exhibit, as well as some replicated skeletal remains to determine the identity of a missing person. The second part of the program gave the participants opportunities actually to solve "a murder mystery." Lenore Barbian, PhD, acting curator of Anatomical Collections,

provided an introduction to the second part of the program by staging the scene and identifying the murder victim and the suspects. Working in teams again, the audience viewed the crime scene (in a contained area on the Museum floor), looked at collected evidence, and examined the evidence at activity stations located throughout the exhibit floor. Based on the testing done at the blood typing, DNA extraction, fingerprint identification, chromatography (ink analysis) and analysis of unknown substances, fiber and hair stations, the participants were able to identify the killer and solve the murder mystery.

### ***Collaborations***

The NMHM collaborated for a fourth year with Dana Alliance for Brain Initiatives in a seven-day celebration of "Brain Awareness Week 2005" in March and 3 days in May. Students from Washington, DC, Maryland and Virginia participated in lectures, and activities with local neuroscientists to see, touch, and otherwise learn about the human brain. Neuroscientists, medical professionals and technicians, and educators from the California Institute of Technology, Rutgers University, the National Institutes of Health, Georgetown University, Howard University, George Mason University's Krasnow Institute, The Lynn A. Chiaverotti Fund, University of Nebraska's Brains Rule Program, the WRAMC and Veterans Brain Injury Center, and WRAMC's Army Audiology and Speech Center partnered with NMHM and the Dana to present lectures and hands-on activities for elementary, middle, and high school students. Presenters included: Carol Trippitelli, MD (local psychiatrist); John Allman, PhD (Cal Tech); Barry R. Komisaruk, PhD (Rutgers); Jane Acri, PhD, Allison Chausmer, David Thomas, PhD, Gaya Dowling, PhD, Charyl Kassed, PhD, Catherine Sasek, PhD, and Anna Staton, PhD (National Institute on Drug Abuse/NIH); Roger Sorenson, PhD, and Dennis A. Twombly, PhD (National Institute on Alcohol Abuse and Alcoholism/NIH); Alyssa Picchini, Allison Bennett, Naomi Raymundo, Sonya Steele, Elizabeth Stillman, Dylan Wint, and Ezat Luba Yomtovian (National Institute of Mental Health/NIH); Richard Benson, Paul Girolami, Nancy Hart, Michelle Jones, Andrea Sawczuk, DDS, PhD, Margo Warren, and Amy Williams (National Institute of Neurological Disorders and Stroke/NIH); Sandra Acquah, Mohommad N. Akhtar, MD, Deniece Clifford, Martha I. Davila-Garcia, PhD, Toye Doggett, Bruk Getachew, MS, Sheketha Hauser, Sara Kalifa, Kebreten F. Manaye, MD, Jahn O'Neil, Yousef Tizabi, PhD, Eric Walters, PhD, and Kimberly Walton, PhD (Howard University); 1LT Kara Delaney, Gerald Schuchman, MD, 1LT Elizabeth Somrack, Joan Tendrich, MA, (Walter Reed Army Medical Center (Speech)); Alice Marie Stevens (Walter Reed Army Medical Center Defense and Veterans Brain Injury Center); Gary R. Chiaverotti (Lynn Foundation); and Karen Graham of the Charles Dana Alliance for Brain Initiatives, Program Sponsor. Archie Fobbs of the Neuroanatomical Collection provided lectures and demonstrations that highlighted various brain functions or disturbances. Over 800 students participated in this 10-day program.

2005 was the sixth year that the Museum collaborated with Health Pact, Incorporated, a local nonprofit entity that assists community organizations by securing medical personnel, community groups, and medical supplies to perform certain medical screenings at health fairs, to present "National Health Awareness Kickoff." This is a series of programs held the first Saturday of each month to acknowledge and explore certain health awareness issues. Medical professionals provided in-depth information on the selected health issue of the month and provided free health screenings for Museum visitors interested in the state of their health. This program continues to be an important part of the Museum's ongoing programs.

The Museum partnered with the Prevention of Blindness Society of the Metropolitan Area to provide free glaucoma screenings, as well as to distribute information about the disease in January; and Arnold S. Ravick, MD and Lawrence G. Lazar of Capital Podiatry Associates, both members of American Podiatric Medical Association, provided free foot screenings for health fair participants in April through the Health Pact, Inc., program.

In November, the National Museum of Health and Medicine collaborated with the Koshland Science Center to present the two-part program "Clue: Solve the Mystery with DNA and Forensic Evidence." Part I of the program, held at the Koshland Science Center, featured Dr. Bruce Budowle, senior scientist with the Forensic Science Laboratory of the Federal Bureau of Investigation and Dr. Jennifer Mnookin, professor at University of California at Los Angeles School of Law. These two forensic experts presented overviews of historical forensic technologies and procedures, as well as the challenges of current evidence collection and analysis. Part II of the program was held at the National Museum of Health and Medicine. This part, entitled "In the Lab: Using Forensic Clues to Find Answers," continued the examination of forensic evidence that began at the Koshland Science Center. The participants who attended Part I visited lab stations to learn how forensic anthropologists gather, analyze, and interpret forensic evidence. Lenore Barbian, PhD, assistant curator of the Museum's anatomical collec-

tion, featured a short lecture to provide background information needed to understand the focus of four lab stations where forensic scientists provided actual hands-on activities that participants took part in. At the stations, Marilyn London, MA, a forensic consultant to Rhode Island's Office of the Medical Examiners and a lecturer in the Department of Anthropology at the University of Maryland, explored the issue of Race Assessment; Brian Spatola, MA, former mortuary supervisor for the Washington, DC Office of the Chief Medical Examiner and a member of the Federal Disaster Mortuary Operational Response Team (Region III) who currently works at the Smithsonian Institution's Museum Support Center, demonstrated how to distinguish forensic remains from non-forensic/non-human remains; Allison Willcox, MA, a biological anthropologist and a doctoral candidate at the University of Pennsylvania, addressed forensic taphonomy, the study of the processes that affect the decomposition, dispersal, and burial of human remains; and Dr. Barbian discussed pathology and trauma.

### ***Ongoing Programs***

The Museum continued to offer guided tours on the weekend to walk-in visitors on the second and fourth Saturday of each month.

### ***Tour/Docent Program***

In addition to general tours, which introduce visitors to the highlights of the exhibition galleries, the following Curriculum Connection tours were offered during 2005: "Human Body, Human Being" and "To Bind up the Nation's Wounds: Medicine During the Civil War." The "Forensics Mystery" workshops continue to be popular hands-on activities for students, families, and adults.

Docents, Museum staff, and AFIP staff benefited from educational presentations made at monthly docent meetings. William Discher, imaging technician in the Human Developmental Anatomy Center, presented a lecture on "The History of 3-D Modeling and Imaging in the Human Developmental Anatomy Center" in January. In February a documentary of the traveling exhibition, "Body Worlds: The Anatomical Exhibition of Real Human Bodies" was screened to give docents greater insight into the development of this extraordinary exhibit created and developed by Gunther von Hagens who developed the plastination process used to preserve body tissue. Jiwon Kim, of the Exhibition Education department at the National Library of Medicine presented a lecture on the exhibit (held at NLM), "Changing the Face of Medicine" which looks at the history of American female physicians in March. In April Dale Smith, PhD, professor and chairman of the Department of Medical History at the Uniform Services University of Health Sciences, presented "Battlefield Medicine," a lecture on the history of battlefield surgery as presented in the exhibit, "Battlefield Surgery 101: From the Civil War to Vietnam" on display at NMHM. Ronn S. Wade, Director of the Maryland State Anatomy Board, presented a tour of the University of Maryland, Baltimore, School of Medicine, including the school's morgue and plastination lab in May. In September Lenore Barbian, PhD, assistant curator of Anatomical Collections, presented a talk on the new "Walt Whitman" exhibit. James Bjork, PhD, of the National Institute on Alcohol Abuse and Alcoholism at the National Institutes of Health, lectured on "How Does the Brain Change as We Age?" in October. Mike Rhode, chief archivist of the NMHM presented a lecture on "The Rise and Fall of the Army Medical Museum and Library."

The training of new volunteers for the docent program that began in the fall of 2004 ended in the January of 2005. Elizabeth C. Lockett, imaging specialist in the Human Developmental Anatomy Center, provided a tour of HDAC's collections. Ms. Lockett also provided training on the Museum's permanent exhibit, "From a Single Cell" and the temporary exhibit entitled, "Human Body Revealed," which showcased images from the book "The Architecture and Design of Man and Woman" by Alexander Tsiras. Janet Burns provided a tour of the exhibit, "The Visible Skeleton," which presented works by Laura Ferguson, a New York artist who used her illness, scoliosis, as a topic for her art. The new docents in training were Solomon E. Barr, MD; Brenda Kiessling, MD; Pamela Kincheloe, RN, BSN, JD; Lewis Larson, BSEE; Vincent Petrella, MD; Marjorie D. Shaw, PhD; and Sheila Anderson, BS, completed the training and joined the docent program in January.

## **EXHIBITS**

Several new exhibitions opened in 2005:

"Penelope: The World's First Autonomous, Vision-guided, Intelligent, Robotic Surgical Instrument Server." Penelope is a robotic scrub assistant with speech recognition, machine vision, and robotic arm path planning and targeting. She was developed by Robotic Surgical

Tech, Inc., a Columbia University spin-out enterprise. Michael R. Treat, MD, president of the Penelope Team believes that Penelope has the potential to save thousands of dollars each year and free up valuable hospital operating room staff for other tasks.

"Body Image/Body Essence: Viewing Ovarian Cancer through the Art of Sculpture." The exhibit explores and highlights the process of overcoming ovarian cancer. The exhibit includes 15 sculptures by Massachusetts artist John Magnan. The collection of sculpture represents the challenges women and their families face when diagnosed with ovarian cancer. The exhibit addresses issues such as self-image, hair loss, chemotherapy, and recovery and explores the conflict between "who I am" and "what I look like."

"A Healthy Heart" is drawn from the book *The Invasion Guide to a Healthy Heart* by Alexander Tsiaras. The exhibit, which examines human anatomy for both the scientific and lay communities, is the third at the Museum that is based on a series of new publications by Tsiaras, who uses full body scans, ultra powerful microscopes and molecular modeling tools to accentuate the body's intricate construction and isolates structures in novel ways.

"Walt Whitman's Soldiers" is an online exhibit. The Museum holds several photos and unique anatomical specimens that open a window onto Walt Whitman's life and his experiences in Washington's Civil War hospitals. These images and artifacts connect us not only to Whitman, who lived and worked in Washington from 1863 to 1873, but also to the soldiers he nursed and to the makeshift institutions where, as Whitman wrote, "every cot had its history." Inspired by his witness of suffering by soldiers and of caregiving by nurses and doctors, Whitman's writings from this tumultuous period stand among his greatest.

"Closing in on a Killer: Scientists Unlock Clues to the Spanish Influenza Virus." A 1997 temporary exhibit on the 1918 influenza pandemic and efforts by Armed Forces Institute of Pathology (AFIP) pathologist Dr. Jeffrey Taubenberger to recreate the genetic structure of the 1918 influenza virus are featured in this virtual exhibit. Today, Dr. Taubenberger's work on 1918 influenza is made possible through his use of the AFIP's Tissue Repository, the largest and most comprehensive tissue repository in the world, which includes cases dating back to 1917 and more than 3 million medical cases, in the hope that the knowledge gained could help prevent or defend against another deadly pandemic.

## COLLECTIONS

The collections areas of the NMHM preserve materials representing key subject areas in the history and practice of American medicine, military medicine, and modern medical and health issues and research. Each collecting division specializes in different media and subject areas. Overall the responsibilities of the divisions are to (1) provide the highest level of professional care to the NMHM collections and their associated documentation; (2) collect objects, specimens, and related archival materials deemed significant and relevant to the mission of the NMHM; and (3) support research, exhibits and public programs through access to collections.

Collections accessioned dozens of historical and contemporary items relating to the key subject areas mentioned above. Moreover, the department facilitated loans of nearly three dozen objects to institutions including the Ben Franklin Tercentenary Exhibition in Philadelphia, National Library of Medicine, Charles Sumner School Museum and Archives, and National Museum of Civil War Medicine. Much of the work of these areas is reflected in Public Programs and Exhibitions as well as Museum outreach activities.

## STAFF

- (A) Jeffrey S. Reznick, PhD, Senior Curator
- Lenore Barbian, PhD, Assistant Curator, Anatomical, and Acting Curator
- (A/D) Darryl Byrd, IMC Contract Archivist
- Gloria Feeney, Volunteer
- (A) Michelle Fontenot, Registrar
- Thomas Gaskins, Archives Technician (Detailed)
- Alan Hawk, BA, Collections Manager
- Donna Quist, BA, Assistant Collection Manager
- Michael Rhode, MA, Chief Archivist
- (A) Vincent Neaz, Photographer (Detailed)
- (D) Tabitha Oglesby, Assistant Archivist

- (A) Sarah Rice, IMC Contract Archivist
- (D) Michael Simons, Registrar
- (A) Catherine Sorge, Assistant Archivist
- (A) Kathleen Stocker, IMC Contract Archivist

## ANATOMICAL COLLECTIONS

Anatomical Collections collects and preserves human and non-human medical, pathological, and anatomical specimens and associated materials documenting normal anatomy and the response to disease and injury.

### **Activities**

#### **L Barbian:**

- Co-curated the exhibition "Walt Whitman's Soldiers."
- Provided 16 lectures/presentations to school groups at the NMHM/AFIP and in the DC metropolitan area.
- Provided expert assistance to the National Library of Medicine in support of their exhibition "Visible proofs: Forensic Views of the Body."

### **Selected Media Interactions**

#### **L Barbian:**

- February 2005: WTTG Fox 5 TV, "Medical Mysteries."
- March 2005: Granada Media, "Battlefield Detectives" segment on the battle of Oriskany.
- March 2005: *Stripe*, "Believe it or not ...."
- May 2005: National Public Radio, "All Things Considered" segment on "Hidden Treasures: A Gruesome Stroll Through Medical History."
- July 2005: Discovery Channel, "Dr. Know" segment featuring specimens from the anatomical collections.

## HISTORICAL COLLECTIONS

The Historical Collection acquires and preserves both artifacts of record and of note documenting the history of the practice of medicine, innovations in biomedical research and the evolution of medical technology. The collection emphasizes the role of the Armed Services of the United States, United States Public Health Service and the United States federal government as it relates to the above themes. The collection is made available for the education of medical professionals, Department of Defense personnel, historians and the public through exhibits in the Museum, loans to other institutions and individualized study.

Historical Collections responds to queries about the history of military medicine as well as general history of medicine from civilian as well as military researchers. Staff responded to a total of 94 significantly complex research requests.

### **Activities**

Historical Collections staff (DS Quist) co-curated an exhibit describing the work of Vince Przybyla, an ophthalmologist who worked at Walter Reed for 38 years. The exhibit opened in December 2005.

The Historical Collections databases currently include 38,880 records. The increase in the total number of records is a result of a transition to the Museum-wide (vice the current departmental datasets now in place) database based on KE-software's KE EMu museum database. Historical Collections is the first dataset to go 'live' on KE EMu. Historical Collection's staff (AJ Hawk) has been involved in editing and standardizing data in the new database. Museum staff (G Feeney) has been active in cataloging the Museum's civil war bullet collection using the new software. The goal of the database is to make the holdings of Historical Collections more widely available to the research community.

Historical Collections has been actively collecting to document the history of military medicine. The collection related to the medical accomplishments of the Global War on Terrorism include medical instrument that had been proven particularly useful during Operation Iraqi Freedom from the 31<sup>st</sup> Combat Support Hospital located in Balad, Iraq, artifacts from Task Force Med 115 documenting the challenges in providing medical treatment to detainees and example of tourniquets adopted by the US Army based on experience in Afghanistan and Iraq. Advances in telemedicine have been preserved by the acquisition of

BMIS-T, a Personal Digital Assistant handheld computer modified by Telemedicine and Advance Technology Research Center (TATRC) to read and update medical records stored on a digital dog tag, and the Remote Clinical Consultation System (RCCS) used at Walter Reed Army Medical Center to provide medical consults to military doctors serving in Somalia, Haiti and Kosovo. Other acquisitions included a brick, inscribed "Don't Spit on the Sidewalk," donated by one of the presenters the National History Day event held at the Museum, the Charles Poser Collection, which includes military medical insignia from around the world, instruments and microscopes from the office of Frank Johnson, long time chemist who worked at the Armed Forces Institute of Pathology and artifacts from the office of Vince Przybyla, ophthalmologist at Walter Reed Army Medical Center.

## OTIS HISTORICAL ARCHIVES

The Otis Historical Archives (OHA) was created in 1971 to house the rare and historic books the Museum had created or collected. Today, its holdings, which date back to the establishment of the Museum in 1862, consist of more than 350 collections that, if laid end to end, would stretch for over a mile. The Archives has several strengths. The Museum's unique heritage makes it a rich repository for information on American military medicine, particularly the Civil War period. The archives is also home to an extensive photographic collection, including many early photomicrographs, abundant examples of medical illustration from the Civil War and World War I, films and videos, and trade literature and advertisements from the late 19<sup>th</sup> century.

Substantial requests for information were handled, frequently regarding sensitive topics. The Vorwald Collection continues to be used for research for asbestosis lawsuits in spite of being open to the public for nearly two decades. Interest in the 1918 influenza epidemic has not yet peaked, and many requests were received to use images from the Archives, all of which are viewable on the website to facilitate research. Gaskins found photographs of the 1957 Asian flu epidemic in the MIS library, scanned them and put them on the website where they were almost immediately used by the Science Museum of London. The Archives has continued sending Russia's Military Medical Museum in St. Petersburg surplus or duplicate books through the DoD's US-Russia Joint Committee on POW/MIAs. A book chapter "A Repository for Bottled Monsters and Medical Curiosities: The Evolution of the Army Medical Museum" on the Medical Museum in the nineteenth century was provided for *Small Shrines and Halls of Fame: Local Museums and Local Histories*, an edited volume by Amy Levin. Rhode was requested to submit his presentation "The Rise and Fall of the Army Medical Museum" for publication. A paper by Rhode on the Museum's changes in WWI was accepted for the University of Newcastle's WWI conference in the spring. He continued to work on preparing his lecture on the Medical and Surgical History of the War of the Rebellion for publication in the *Journal of the History of Medicine and Allied Sciences*. Technical information on nineteenth-century photomicroscopy, as well as a loan of photomicrographs by William Thompson, was provided to the National Gallery of Art for their symposium on Thomas Eakin's portrait of Thompson. Records and photographs on St. Elizabeth's hospital were provided to the GSA which has resumed control of the property. Images of the old Army Medical Museum were provided for the Adolph Cluss Exhibit Project. Stryker Trauma scanned portions of Gerhard Kuntscher's World War II orthopedic publications from captured German records and plans to republish them.

Additionally, research and historical material, mostly on military medicine, was provided to AFIP's Public Affairs Office, WRAIR, WRAMC, USUHS Department of Medical History, the OTSG's Borden Institute as well as National Library of Medicine (including material for their forensic medicine exhibition), *Adbusters Magazine*, Arc Welder Films, Arizona State University, Arcwelder Films, *Atlanta Journal-Constitution*, Catholic University, Coran Healthcare, Engel Entertainment, Enslow Publishers, Inc., Farcountry Press, Federation of American Societies for Experimental Biology, Final Cut Productions, Fingerhut Powers and Associates, George Washington University, Gibbs Smith, Government Executive Magazine, GSA, Harvard School of Public Health, Jim Lehrer News Hour, Learning Media Ltd./State Services, Library Company of Philadelphia, McGill University, Miami University, Montreal General Hospital, Mountain Press Publishing, National Geographic Society, National Museum of Natural History, NOVA/WGBH Educational Foundation, *NurseWeek*, Ontario Science Centre, Oregon Public Broadcasting, Picture Research Consultants, Inc., RCSR Productions, RCW Communications Design, Science Museum of London, Science Web, Inc., Setting Pace, Simpson-Thatcher, Stryker, TSN-The Student Network, Teaching Company, Tuttle-Mori Agency, Inc., University of

California - San Diego, University of Cambridge, University of Wisconsin - Oshkosh, University of Oklahoma, University of Texas, *Vanity Fair*, WETA, WNET/13 Wide Angle, and the *Watchtower*.

The significant Archives presence including the Guide to the Collections of the Museum on the website remains the main way researchers begin to use the archives, and several finding aids were added to the website. More archival collections were listed in the Library of Congress' National Union Catalogue of Manuscript Collections (NUCMC), ensuring wider researcher use of the collections. The collaborative exhibit and publication with the Borden Center on the history of surgery, *Battlefield Medicine 101*, was revised with support from the Archives. Photographic and historical support was also provided for the Museum's Walt Whitman Civil War exhibit. The electronic AFIP Calendar mentioned in last year's report did not come to fruition.

The Medical Illustration Service Library, through the IMC scanning project, is being scanned. Rhode is the Task Order Manager for the MIS part of the project and hired assistant archivists, travelled to West Virginia to oversee the process, selected material for scanning, reviewed the material and recommends accepting the work on behalf of the government. Rice and Stocker are processing the images for scanning and then cataloguing them when they return. Gaskins and Sorge are providing the quality control. 71,000 images were scanned this year, and are currently being catalogued and indexed. Three major groups of photographs: the Museum and Medical Arts Service (MAMAS) photographs taken during WWII in Europe and Asia, the images from the publication *Atlas of Tropical and Extraordinary Diseases*, and AFIP staff portraits were scanned as well as general photographs from 1985-1986.

Computerized cataloguing on the collection level has continued in the shelf inventory. Cataloguing for the General Medical Products Information Collection, Medical Ephemera, New Contributed photographs, Audiovisual collection, AFIP Historical Files and others was done. Implementation of a comprehensive computer catalogue for the entire Museum continued with data from the archives being turned over to KE Software for conversion to their EMU database. New material acquired included Frank Johnson's office files and books, Howard Hartman's educational dentistry slides and Sherman Menton's World War II navy records. Museum records from staff members were added to the archives. The AFIP photography department gave the archives their old photo files, which included many portraits of AFIP staff.

### **Activities**

Rhode served on the AFIP's Institutional Review Board and HIPPA committees as well as Museum committees including the Admin group, the collections committee and the database committee. Oglesby resigned to accompany her husband to Texas A&M where he entered graduate school. Sorge, formerly of USUHS's library, has been a valuable addition to the staff. Archives alumni Joan Redding joined the Borden Institute and is now the acting editor of the *Textbook of Military Medicine*.

### **Selected Media Interactions**

- May 2005: Interview on *Battlefield Surgery 101* for Swedish Radio's *Vetenskapsradions veckomagasin*, M Rhode. Interview aired June 3 online at <http://www.sr.se/cgi-bin/p1/program/artikel.asp?ProgramID=415&artikel=633290>
- July 2005: Interview for *The Press-Enterprise*, M Rhode.
- August 2006: Interview for "Morbid museum fleshes out history," *Dallas Morning News*, M Rhode.

## **RESEARCH COLLECTIONS**

NMHH research collections consist of 2 divisions: the Human Developmental Anatomy Center and the Neuroanatomical Collections Division. Their joint mission is to acquire, preserve, and encourage the use of major research collections for all qualified members of the research community. Both collections are made available for research and for education by appointment and via website. Continued stimulation of new hypothesis-driven research is a top priority as the resources of both collections are used by AFIP staff.

## **STAFF**

Adrienne Noe, PhD, Project Director, HDAC  
Elizabeth C. Lockett, Collections Manager, HDAC

- (D) William F. Discher, Imaging Specialist  
Austin Chang, Imaging Technician Virtual Embryo Project, HDAC  
Jack Rutledge, Program Evaluation, Virtual Embryo Project, HDAC  
Marjorie Shaw, PhD, Imaging Technician Virtual Embryo Project, HDAC  
Archibald J. Fobbs, Collections Manager, Neuroanatomical Collections
- (D) Freddie Pruitt, National Science Foundation Assistant Technician  
Shannon Fobbs, Volunteer, Neuroanatomical Collections  
Tony Hammonds, Volunteer, Neuroanatomical Collections  
Stephen Schiaffino, PhD, Volunteer, Neuroanatomical Collections

#### ***Human Developmental Anatomy Center***

The Human Developmental Anatomy Center acquires and maintains collections pertaining to general developmental anatomy and neuroanatomy. Collections such as the ones housed at the Human Developmental Anatomy Center provide researchers a central location from which to obtain data about normal development for both human and common research species. HDAC maintains and archives the largest collection of human and comparative developmental material in the United States, in such a way as to make them most useful for research activities, yet preserve them for future generations of researchers.

Staff supported over 2 dozen VIP and scholarly tours and provided access for over 150 days of supported research and responded to 23 significant data requests. Institutions whose staff member used the Center include: National Institutes of Health, Nuclear Magnetic Research Center, Bethesda, Md; National Institutes of Health, National Library of Medicine, Bethesda, Md; Louisiana State University, Health Sciences Center, New Orleans, La; the Society for Developmental Biology, Bethesda, Md, Anatomical Travelogue, Inc., NYC, and the Johns Hopkins University School of Medicine, Center of Magnetic Resonance Microimaging, Baltimore, Md.

#### ***Activities***

Development of "A Healthy Heart" temporary exhibit of visualizations of human anatomy from photos, MR and CT data. NMHM, Washington, DC.

#### ***Neuroanatomical Collections***

The Neuroanatomical Collections encourages use of its assets by all qualified members of the research community. This division collects and preserves valuable collections and objects relating to neuroanatomy and is a premier repository in the United States for collections focusing on neuroanatomy in the embryo, the adult human, as well as other selected species.

The division includes the following collections:

- Yakovlev-Haleem Neuropathology and Development Collection
- Blackburn-Newmann Collection
- Lindenburg Forensic Pathology Collection
- Welker Comparative Neuroanatomy Collection
- Rubenstein Collection
- Adolph Meyer Neuropathology and Development Collection
- Isabel Lockhard Comparative Neuroanatomy Collection
- Pulos Anatomical Collection
- Denny Brown Neuromuscular Collection
- Starr Collection
- William Cruce Collection
- Harrison Collection
- John I. Johnson Comparative Collection
- C. Miller Fisher Neuroanatomical Collection
- Diane Smith Comparative Neuroanatomy Collection

#### ***Activities***

Researchers visiting the Neuroanatomical Collections increased by 60 percent. The National Science Foundation continues to recognize the collaboration among the National Museum of Health and Medicine/AFIP, the University of Wisconsin-Madison, and Michigan State University as one of its model projects it has funded, and has continued and increased the funding for NMHM and these collaborators. This grant provides collections management and acquisitions and databasing support.

Manuel Casanova, MD, Professor of Psychiatry and Neurology, Veterans Administration Medical Center, Augusta, Georgia and Daniel Buxhoeveden, MD, Assistant Professor, Medical



College of Georgia are using the collection in their Quantitative comparative morphology of cell columns in humans and nonhuman primate brains. The goal of this project is to compare organization of cell columns in the temporal region of humans to that of primates.

John Allman, PhD, Division of Biology, Caltech University, Pasadena, California, and his staff in collaboration with Neuroanatomical collections staff, have conducted research on the developing spindle cells and their correspondence to fetal development and adult mental illness. Also in the beginning stages is a stereology (algorithmic mapping) of the human and other mammalian brains project.

#### **Website**

The University of Wisconsin-Madison and Michigan State University implemented and supervise the brain collection website in a project operated and directed on-site by Archie Fobbs. Financial support for this website is provided by a grant from the National Science Foundation. Collection inquiries via the website increased 50 percent over those of 2005. Requests for collection images and scheduled visits to the collections division and to the Museum have all increased as a result of the website. The website averages 110 hits per day from all over the world. Educators continue to report that the website is a useful curriculum development resource for science projects and for answering structural and functional questions about the brain and is available to the general public. The website widely publicizes images and information about the existence, contents, and value of the brain collections. Via the Internet, information about sectioned brain specimens at the three institutions is presented and promoted electronically on our Brain Collection home page <http://www.brainmuseum.org>, with additional information on ancillary sites:

<http://www.manateebrain.org>; <http://www.brains.rad.msu.edu> (the Michigan State portal); and <http://turing.commtechlab.msu.edu/default.htm> (the database site). The 4 sites are interlinked; all can be reached from one another. The visual presentations that we have already made on the Internet, and that we are about to expand, have aroused interest in comparative neuroanatomy and enhanced understanding about the nervous system to a wide audience. In addition, people with little understanding of the brain can gain a detailed understanding of mammalian brain structure.

#### **Conservation**

The fluid-preserved tissue conservation for the Yakovlev-Haleem Collection and the Welker Comparative Neuroanatomy Collection continues. Conservation procedures are performed on a regular basis and fluids are changed as needed. In an effort to improve the conservation efforts the fluid preserved tissue of the Yakovlev-Haleem Collection have been transferred to the Museum's offsite storage facility in Gaithersburg, Md.

Collection staff are currently identifying conservation needs and examining Welker Comparative Neuroanatomy Collection slides along with all other collection slides. This information is used to continue to develop and implement a formal conservation plan. The Yakovlev-Haleem library reorganization continues. As the reorganization takes place, evaluation of the condition of the contents will take place. Due to a breach in the outer wall, portions of the Yakovlev-Haleem library will be relocated to the Museum's offsite storage facility in Gaithersburg, Md. Slides from the C. Miller Fisher Collection are in the process of being stored in slide cabinets at the Gaithersburg, Md facility.

#### **Tours/Use**

Neuroanatomical Collections Division hosted approximately 100 tours during 2005 and user hours have increased significantly (40%) over those of 2005.

#### **EDUCATION**

##### **Courses**

##### **L Barbian:**

1. 18<sup>th</sup> Annual Forensic Anthropology course at the National Transportation Safety Board Academy in Ashburn, Va from June 6 through 10, 2005. Participants numbered 66. Planning for the 2006 course was undertaken.
2. Laboratory instructor for the forensic anthropology component of the Forensic Identification and Emerging Technologies course sponsored by the Department of Oral and Maxillofacial Pathology.

##### **Trainees**

1. The Human Developmental Anatomy Center hosted 5 interns from local high schools.

2. The Neuroanatomical Collections hosted 3 interns from local universities and the Collections were instrumental in providing valuable educational experiences for students from the Presidential Classroom, National Youth Leadership Forum on Medicine, Rappahannock High School, Swanson Middle School, George Washington University, and Howard University. The Howard County Technology Magnet Applications and Research Laboratory Program has partnered with Neuroanatomical Collections and the Human Developmental Anatomy Center to promote internships for high school students of Howard County. This relationship provides research opportunities for students attending the county's technical magnet programs at Long Reach in Columbia, Md and River Hill High School in Clarksville, Md.
3. Elementary and secondary educators continue to increasingly use the collection for classroom instruction. One such institution is Bonnie Branch Middle School where Carine Fobbs provided students with a presentation on Functional Magnetic Resonance Imaging on the brain.
4. Data and images from Museum collection specimens are made available for use in education at all levels. This is done via the Internet or via physical diskettes. This resource is used by students nationwide to access information about mammalian brain structure.
5. Magnetic Resonance Imaging (MRI) scans provide volumetrically and spatially accurate data about the internal architecture of brains of rare or difficult-to-process species of animals. The spatial data can be analyzed in 3-dimensional models. In the neuroanatomical collections area, student interns obtained scans using software such as Adobe Photoshop and Surf Driver for 3D modeling. The project has provided opportunities for training interns in the use of data storage, electronic imaging, and the acquisition of neuroanatomical data, including 3-dimensional surface render modeling.
6. The Museum hosted dozens of special behind-the-scenes tours for local and distant schools at all educational levels and for many professional specialties.

#### **Faculty Appointments**

1. Adjunct Faculty, School of Computational Sciences, George Mason University, Fairfax, Va, A Noe.
2. Adjunct Faculty, Department of Community Health and Family Practice Howard University College of Medicine, Howard University, Washington, DC, JS Reznick.

#### **Presentations**

1. January 2005: Washington, DC, AFIP, "The great disease enemy, KAK'KE (beriberi) and the Imperial Japanese Army," AJ Hawk.
2. February 2005: Washington, DC, NMHM-AFIP, "Introduction to brain function and neuropathology," AJ Fobbs.
3. March 2005: Washington, DC, NMHM-AFIP, Brain Awareness Week, "Introduction to brain function and neuropathology," AJ Fobbs.
4. April 2005: Washington, DC, NMHM-AFIP, Brain Rules, "Introduction to brain function and neuropathology," AJ Fobbs.
5. April 2005: Bethesda, Md, National Library of Medicine, "Healing the nation: soldiers and the culture of caregiving in Britain during the Great War," JS Reznick.
6. May 2005: Washington, DC, NMHM-AFIP, Brain Awareness, "Introduction to brain function and neuropathology," AJ Fobbs.
7. May 2005: Coolfont, WV, Federal Emergency Management Attorneys Conference, "Forensic anthropology," L Barbian.
8. June 2005: Washington, DC, NMHM/AFIP, National Youth Leadership Forum on Medicine, "Introduction to Brain Function and Neuropathology," AJ Fobbs.
9. June 2005: Washington, DC, NMHM-AFIP, Introduction to the film "Battle Circus," AJ Hawk.
10. June 2005: Manchester, UK, University of Manchester Center for the Culture History of War and Center for the History of Science, Technology and Medicine, "Disability, memory, and material culture," JS Reznick.
11. July 2005: Washington, DC, AFIP, AFIP Summer Intern Program, "Introduction to brain function and neuropathology," AJ Fobbs.
12. July 2005: Washington, DC, NMHM-AFIP, National Youth Leadership Forum on Medicine, "Introduction to brain function and neuropathology," AJ Fobbs.

13. July 2005: Urbana, Ill, American History Teachers' Collaborative Summer Institute of the Urbana School District, "War, society, and the history of medicine in the United States," JS Reznick.
14. August 2005: Germantown, Md, International Monetary Fund Summer Camp, Bretton Woods Recreation Center, "Introduction to brain function and neuropathology," AJ Fobbs.
15. October 2005: Washington, DC, American University, Public Archaeology Workshop, "Living with the dead," L Barbian.
16. October 2005: Washington, DC, NMHM-AFIP, "Learning about forensics III: a museum murder mystery," L Barbian.
17. November 2005: Baltimore, Md, American Radiological Services, "Human skeletal identification: forensic anthropology," L Barbian.
18. November 2005: Washington, DC, NMHM-AFIP, "Society for Neuroscience Brain Museum," AJ Fobbs.
19. November 2005: Washington, DC Convention Center, Society for Neuroscience Meetings, "Similar distinctive arrangements of sensory regions in cerebral cortex of artiodactyl sheep and cetacean dolphins," AJ Fobbs.
20. November 2005: Arlington, Va, Culpepper Garden Senior Center, "Civil War hospital trains," AJ Hawk.
21. November 2005: Washington, DC, NMHM-AFIP, "Clue: solve the mystery with DNA and forensic evidence," L Barbian.
22. November 2005: Washington, DC, Sumner School, Adolph Cluss Exhibition Project, "The rise and fall of the Army Medical Museum and Library," M Rhode.
23. November 2005: Washington, DC, Smithsonian Institution's National Museum of American History, "Tuesday Colloquium," M Rhode.
24. November 2005: Washington, DC, District of Columbia Historical Studies Conference, "Walt Whitman's soldiers," JS Reznick.
25. November 2005: Washington, DC, NMHM-AFIP, Introduction to the film "Behind the Lines," JS Reznick.

## RESEARCH

### Journal Article

Demetrikopoulos MK, Morris LG, Fobbs AJ. The marine mammal brain game. *The Science Teacher*. 2005;72:24-9.

### Abstract

Johnson JI, Morris JA, Fobbs AJ. Similar distinctive arrangements of sensory regions in cerebral cortex of artiodactyl sheep and cetacean dolphins. Society for Neuroscience Meetings, Washington, DC, November 2005.

### Book Chapter

Noe A. The Human Embryo Collection. In: Maienschein J, Glitz M, Allen GE, eds. *Centennial History of the Carnegie Institution of Washington. Volume V. The Department of Embryology*. Cambridge, UK: Cambridge University Press; 2005:21-61.

### Book

Reznick JS. *Healing the Nation: Soldiers and the Culture of Caregiving in Britain During the Great War*. Manchester, UK: Manchester University Press; 2005.

### Other Publications

1. Hawk AJ. "Hospital ships." United States at War. ABC-CLIO.  
<http://www.usatwar.abc-clio.com>
2. Hawk AJ. "Military hospitals in the American Civil War." United States at War. ABC-CLIO. <http://www.usatwar.abc-clio.com>
3. Hawk AJ. "Minie ball." United States at War. ABC-CLIO.  
<http://www.usatwar.abc-clio.com>
4. Hawk AJ. "Percussion cap." United States at War. ABC-CLIO.  
<http://www.usatwar.abc-clio.com>
5. Hawk AJ. "Review of John H. Brinton. *Memoirs of John H. Brinton: Civil War Surgeon, 1861-1865*." *H-CivWar, H-Net Reviews*, April 2005. <http://www.h-net.org/reviews/showrev.cgi?path=228311119638375>

6. Reznick JS. "Honor WWI vets before they're all gone." *The Baltimore Sun* (November 11, 2005) Commentary, 15A.
7. Reznick JS. "John Galsworthy." In: Albrecht GL, ed. *Encyclopedia of Disability*. New York: Sage Publications; 2005.

### **Projects**

1. History of the Imperial Japanese Army Medical Department, 1870-1945: AJ Hawk.
2. Military medicine and high performance computing: A Noe.
3. History of information presentation for military battlefield environments: A Noe.
4. History of prosthetics and orthotics, ca. 1860-present: JS Reznick.
5. Military medicine in World War I America: JS Reznick.

### **Collaborators**

1. John Allman, PhD, Division of Biology, California Institute of Technology
2. Manuel F. Casanova, MD, Gottfried and Gisela Kolb Endowed Chair in Psychiatry, University of Louisville Department of Psychiatry
3. Karen Graham, Dana Alliance for Brain Initiatives
4. John I. Johnson, PhD, Department of Anatomy, Michigan State University
5. Jason Kaufman, PhD, Division of Biology, California Institute of Technology
6. Kebreten Manaye, MD, Department of Physiology and Physics, Howard University College of Medicine
7. Lori Marino, PhD, Neuroscience and Behavioral Biology Program, Emory University
8. John Morris, Neuroscience Program, Michigan State University
9. Nancy Peckerar, Downcounty Partnership Coordinator, Spring Mill Field Office, Montgomery County Public Schools
10. William W. Seeley, MD, Clinical Fellow in Behavioral Neurology, University of California San Francisco, Memory and Aging Center
11. Robert Switzer III, PhD, Neuroscience Associates, Inc.
12. Michael Szesze, Montgomery County Public Schools, Program Supervisor for Science, K-12
13. Wally I. Welker, PhD, Department of Physiology, University of Wisconsin-Madison
14. Kondi Wong, MD, Department of Neuropathology, AFIP

## **PROFESSIONAL ACTIVITIES**

### **Official Trips**

1. February 2005, American Academy of Forensic Sciences Annual Meeting, New Orleans, La, L Barbian (AFIP).
2. April 2005, Medical Museums Association Annual Meeting, Birmingham, Ala, AJ Hawk (AFIP).
3. April 2005, American Association for the History of Medicine Annual Conference, Birmingham, Ala, AJ Hawk (AFIP).

### **Manuscripts Reviewed**

#### **JS Reznick:**

1. Manchester University Press (reviewer of manuscripts)
2. *Studies in Social Science* (special issue editor and reviewer)